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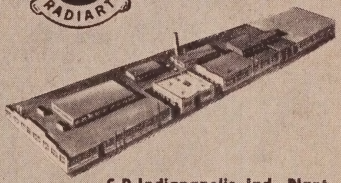

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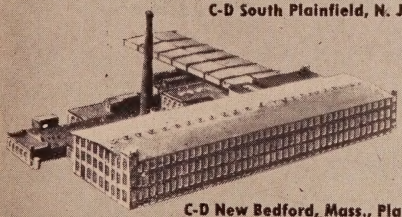

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Vol. 18 JANUARY, 1953 No. 1

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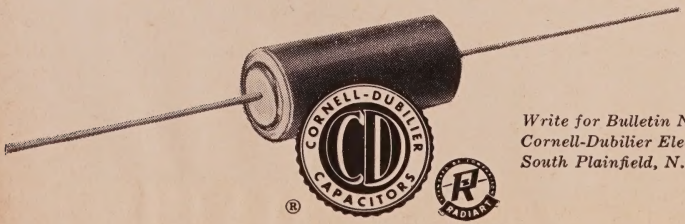

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To You... whom we think of as a friend and for whose pleasure and profit "The Capacitor" is dedicated, we sincerely wish a **New Year** of continued happiness and prosperity.

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TELEVISION INTERFERENCE (TVI) FILTERS

Television interference (TVI) has been a greater problem to the radio amateur than broadcast interference ever was. This is due at least partly to the fact that television interference is somewhat more obnoxious to the eye than occasional radio interference is to the ear. Also, because of the higher frequencies at which they operate, TV receivers are more susceptible to interference from amateur transmitters than are the lower-frequency standard radios.

Most cases of TVI are rather stubborn; the amateur who must remove this interference or leave the air often finds his ingenuity taxed. During the past three years, considerable technical information regarding the TVI-proofing of transmitters has appeared. The recommended measures include the complete shielding of transmitters, and the filtering and/or bypassing of all power supply or control leads entering or leaving the transmitter. When TVI persists even after these steps are taken, and it is determined that the offending signals are picked up by the receiving antenna or its lead-in, some form of interference filtering must be employed at the receiver.

High-Pass Filters for Receivers

The most satisfactory filter to install at the receiver is the **high-pass** type. This filter must be designed to suppress all frequencies lower than about 35 or 40 megacycles. The television frequencies will be passed with very little attenuation. While the cutoff ferquencies just mentioned will permit amateur operation up to and including the 10-meter band, the cutoff frequency would have to be raised to 54 or 55 Mc. if the 6-meter amateur band is to be used. It is probable, however, that a filter permitting 6-meter transmission

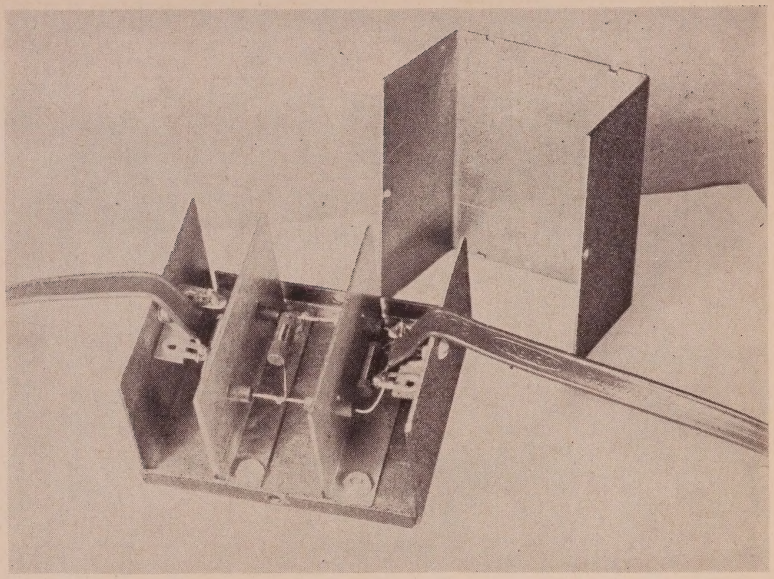

Fig. 1. High-Pass Filter for 300-ohm Antennas and Receivers.

would cause some impairment of reception in the nearby TV Channel 2.

We are devoting this issue of "The CAPACITOR" to a description of TVI filters largely as the result of the apparent wide interest of our "ham" readers in reducing or eliminating interference at television receivers. We have selected for description filter designs which have given good service in the field. However, it must be recognized that each case of TVI is apt to be individual. There is no single cure for all cases. The reader must be prepared to perform necessary tests and to make such changes in any filter as may be required to correct a particular case of interference. We believe, however, that the filters shown in this article, will be found to be successful in a majority of cases.

Figures 1, 2, and 3 illustrate two types of high-pass TVI filters. The unit shown in Figures 1 and 2 is for use with 300-ohm antennas; the one in Figure 3 for 72-ohm coaxial lead-ins.

The 300-ohm unit (See Figure 1) is built in a 3½" x 3" x 2" metal radio utility box, although it undoubtedly can be made smaller in size. The two internal shield plates are cut from aluminum or steel sheet stock and folded for mounting as angle brackets. As may be seen in Figure 1, the ceramic capacitors (C_1, C_2, C_3, and C_4 in Figure 2) pass snugly through holes in the shield plates.

Each of the two end coils (L_1 and L_3 in Figure 2) is mounted by its leads to the lugs of a 2-lug terminal strip. The center coil, L_2, is mounted by soldering its leads directly to the pigtails of the ceramic capacitors. Short lengths of 300-ohm ribbon, connected to the end terminal strips, provide input and output access.

The coils are wound with No. 26 enamelled wire on short lengths

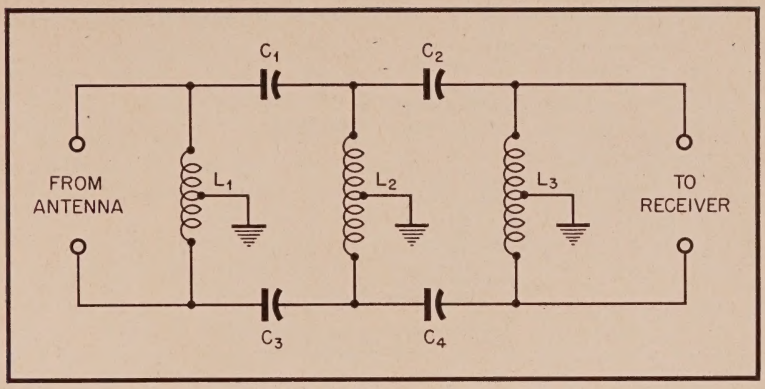

Fig. 2. High-Pass Filter for 300-ohm Lead-in.

of 3/16-inch-diameter insulating rod. Polystyrene or good-grade bakelite should be used. Required coil turns are given in Parts List at end of this article.

Construction of the filter for coaxial lead-ins (See Figure 3) is similar to that of the 300-ohm type. The three coils are wound with No. 26 enamelled wire on short lengths of 3/16-inch-diameter bakelite or polystyrene rod. Required coil turns are given in Parts List at end of this article.

Note by reference to Figure 3 that capacitors C_3 and C_4 are returned respectively to coaxial connectors J_1 and J_2. This procedure is necessary for proper high-frequency grounding in the input and output circuits. Coil L_2 is returned directly to the metal shield box, in which the filter is housed, as ground.

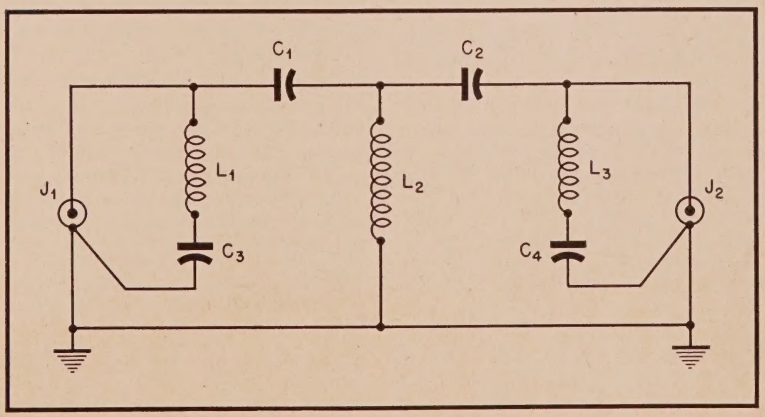

Fig. 3. High-Pass Filter for Coaxial Lead-in.

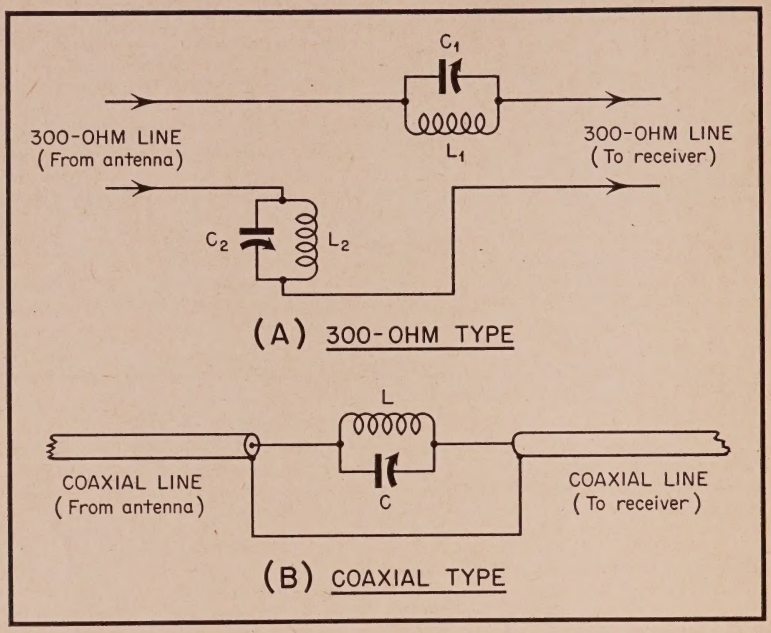

Fig. 4. Wavetrap Filters for TVI.

Wavetrap-Type Filters

The absorption wavetrap, long a standby in the elimination of radio broadcast interference, is also effective in some forms of TVI not requiring the complication of a high-pass filter.

Figure 4 shows the arrangement of wavetraps as filters for 300-ohm and coaxial lead-ins. An identical trap must be inserted into each lead of a 300-ohm line (See Figure 4A). Each trap is tuned to the frequency of the interfering signal. As shown in Figure 4A, the coils of the traps must be mounted at right angles to minimize mutual coupling. In order to prevent interference pickup by the wavetrap coil itself, both traps should be enclosed in shield boxes or cans.

Only one trap is needed, in the "hot" lead, of a coaxial lead-in (See Figure 4B). For most effective operation, the entire trap should be shielded.

The tuning capacitors (C_1 and C_2 in Figure 4A, and C in Figure 4B) may be miniature air-tuned or ceramic units. For amateur bands, the maximum capacitance can be 50 or 100 uufd. Details regarding the number of turns for each coil, for a particular amateur band and tuning capacitor, may be found in the amateur handbooks.

Wavetraps are not as effective in interference elimination as are filters. However, in less obstinate cases of TVI they often suffice, and their greater simplicity recommends their use.

Construction and Installation Rules

1. Use adequate shielding in all filters and wavetraps. The entire unit must be housed in a metal box or can. A multisection filter must be further shielded internally by metal shield partitions erected between each filter section. This type of construction is seen in Figure 1.

2. Use fairly heavy sheet metal for the filter shield-box. Copper is the best material, but standard radio shield boxes more readily available in aluminum or steel are suitable. Employ solid construction, taking care that all holes are closed and shield partitions bonded tightly to the sides of the box.

3. Connect the filter output to the receiver antenna terminals by the shortest possible leads. If these leads are long, they may pick up interference after the filter.

4. Connect the filter box itself to the receiver chassis with a short length of heavy wire (not smaller than No. 14 in size) or bolt the box securely to the chassis. Ground the receiver chassis. By ground we mean an actual connection to earth. The ground connection must be a heavy wire (not smaller than No. 14 in size) run as directly as practicable to the nearest cold-water pipe or to a pipe driven at least four feet deep into moist soil.

5. If a wavetrap-type filter is used, set it to eliminate the actual interfering signal rather than using a signal generator for the adjustment. After this adjustment is made, remember that the trap is tuned only to eliminate signals on its resonant frequency. It must be retuned if the interference shifts to another frequency within its tuning range.

6. Before installing a filter of any kind in the antenna lead-in, determine by careful test that the interference actually is arriving via the lead-in. This may be done by removing the antenna from the receiver and observing whether the interference disappears. If it remains, it is probably entering through the power lines or by direct pickup due to inadequate shielding in the receiver.

7. Match impedances. Do not attempt to use with a 75-ohm receiver, a filter designed to operate in a 300-ohm line. Failure to observe correct impedance relationships will impair receiver operation as well as reduce filter effectiveness.

8. Always use a high-pass filter at the receiver. A low-pass filter may be used at the transmitter to suppress radiation of harmonics which might create TVI.

9. In all filters, use at least 3 sections for maximum rejection of unwanted frequencies. The greater the number of sections employed, the more effective filter operation will be.

10. A good filter is one using high-Q components. Always employ a top grade of mica or ceramic capacitors.

PARTS FOR FIGURE 2

C_1, C_2, C_3, C_4—20 uufd. ceramic (C-D G023*/2TM5Q2).

L_1, L_3—28 turns No. 26 enamelled wire closewound on a 3/16"-diameter rod. Tap 14th turn.

L_2—14 turns No. 26 enamelled wire closewound on a 3/16"-diameter rod. Tap 7th turn.

PARTS FOR FIGURE 3

C_1, C_2—25 uufd. ceramic (C-D G026*/2TM5Q25).

C_3, C_4—40 uufd. ceramic (C-D G031*/4TM5Q39).

J_1, J_2—Coaxial "jack" connectors

L_1, L_3—17 turns No. 26 enamelled wire on 3/16"-diameter rod. Space to winding length of ½ inch.

L_2—9½ turns No. 26 enamelled wire on 3/16"-diameter rod. Space to winding length of ½ inch.

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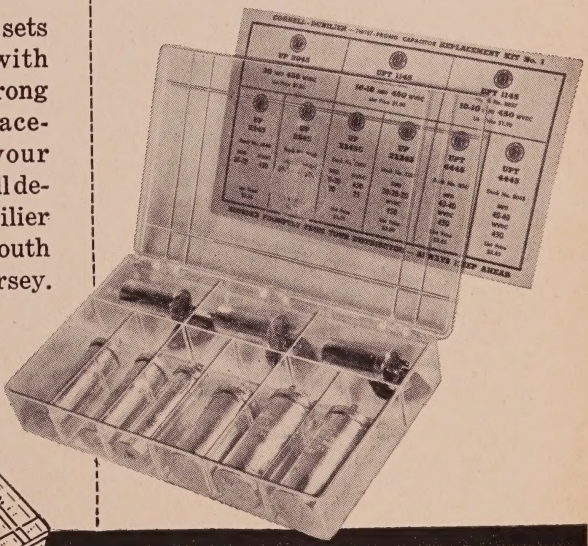

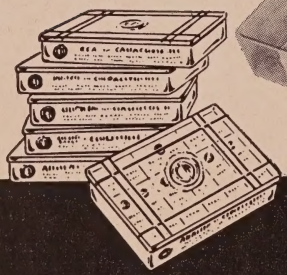

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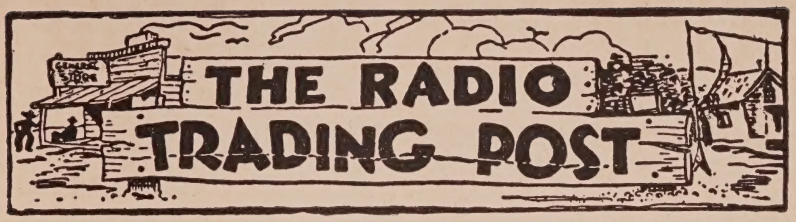

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TRADE OR SELL—Precision sig. gen. E-200, perf.; set of Ghirardi books; misc. radio parts; foreign stamps. Want spotting scope and enlarger. Max Adler, 850 Bryant Ave., Apt 4A, Bronx 59, N. Y.

WANTED—Cabinet for BC-312 rec.; BC-312 rec. (working or not), or 3 to 6 mc. command set rec.; tubes or power supplies optional. T. Williams, 100 Rugby Rd., Syracuse 6, N. Y.

WANTED—Riders no. 19 to date. Will pay cash or trade tubes, catalogs, and magazines, 1920-1935, antique radios. G. N. Hartwell, 38 Charlemont St., Newton Highlands, Mass.

WANTED—Defective test eqpt. and meters of all types; cash or trade. State cond., nature of defect, make model, etc. Will repair and recalibrate on trade or cash basis. Paul Brassard, 1422 Tremont St., Roxbury 19, Mass.

FOR SALE—Govt. surplus scope, BC-412-B with schematic and data for conversion to conventional scope; like new, 13 tubes $45. Cash or test eqpt. R. W. Jennings, 213 Princeton Ave., Buffalo 14, N. Y.

FOR SALE—RCA police transmitter mod. for 10 m., comp. with tubes, dual vibrator supply cables, cont. box, mike, crystals, relay for remote switching between 2 freq., $32.50; Gonset 10 m. converter $27.50 or both $50 FOB. V. Esgar, 2842 South Court, Palo Alto, Calif.

FOR SALE—Double-stacked conical 16½ rods plus tie rods; ½ wood plugs, 6 to a box $6.25 ea.; screw eyes $2.50 per 100; strap stand offs $6.75 per 100; 2 TV's on one antenna $3.49. A. M. Alexander, 159 Putnam St., New Haven, Conn.

FOR SALE—100 tech. reference books on motion picture sound projection and engineering from 1928 to date. Cinema Technicians Society, 630 Postal Pl., Mar Vista, Calif.

SWAP—125 w. modulator, PP 811's, with self-contained speech amp. and power sup., highcurrent filter chokes, Electrovoice 910 mike, and radio components. Want Revere "99" 8mm camera, 8mm action editor, and other photo eqpt. Will pay part cash. David D. Bulkley, 1825-C Palmer Ave., Larchmont, N. Y.

FOR SALE—BC-312C comp. with pwr. sup., spkr., broad-band 10 meter converter, external S meter, NL $75. Looking for 250 w. class B modulator. D. G. Kohler, 415 Sweetwood Ave., Omaha 5, Neb.

WANTED—Hallicrafter small short wave rec. for high school student. J. P. McCullen, 3050 Bainbridge Av., Bronx 67, N. Y.

FOR SALE—RCP sig. gen. mod. 730 AM or FM, used only a few times $25. Albert Blizzard, Brandywine, W. Va.

FOR SALE—8 TV cabinets for 10" to 21" tubes, $5 to $45; RCA 630TS 10" table set $40; RCA 8TS30 16" mahogany cabinet $90; Columbus VFO exciter-NBFM modulator $38; mobile and AC 6 and 10 meter converters, half price. J. Wasiewicz, 74 Canterbury Rd., White Plains, N. Y.

FOR SALE—Meissner sig. shifter, like new $50; Gonset 10-11 conv. $20; kw power supply components; coin-oper. radios $15; Heathkit sig. gen. and sig. tracer. Brown Taylor, 717 Currey Rd., Nashville, Tenn.

SALE OR TRADE—Westinghouse panel AC voltmeter, 0-150 v., 25-125 cy.; AC ammeter 0-75A CT ratio 75/5, 75/5-150/5, 25-125 cycles; current transf. 75/5-150/5, 25-60 cy. Make offer of cash or PA eqpt. L. J. Cunningham, 45 W. Charlotte Ave., Cincinnati 15, Ohio.

SELL OR TRADE—Voigtlander Avus 9x12 D. E. Bellows Skopar f4.5 lens, 6 3¼x 4¼ holders, FP holder, lens shade asstd. filters, 35mm back for Kodachrome, FR Cutfilm tank. $60 or trade for what? M. H. Davidson, 8606 Wilshire Blvd., Beverly Hills, Calif.

SALE OR SWAP—TBY-6 transceiver in good cond., comp. with AC or DC power supply, with spare tubes. Best cash offer or what have you? Interested in test eqpt. Murray Cohen, 2078 Wallace Ave., N. Y. 60, N. Y.

SELL OR TRADE—25 lesson correspondence course, ICS "Traffic Management," for cash or what have you? Sidney J. Tendler, 118 E. 103rd St., N. Y. 29, N. Y.

WANTED—National receiver 15 kc to 600 kc. Aryl D. Aldred, 126 Elmhurst, Elmhurst, Ill.

FOR SALE—Phono motor converter, 110 v. 50 w. $2.50; 3-way port. radio $10 comp.; Jewel personal port. with tubes less battery $7.50. Victor Kozma, 1665 Stadium Ave., New York 61, N. Y.

SELL OR TRADE—Victor 24C 16mm sound movie proj., A-1 cond. $165; Vee Dee X Channel 5 Yagi $5.50; 5 asst. radio books $6.50 G. N. Manning, 205 W. Walnut Ave., Dalton, Ga.

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FOR SALE—1952 Zenith Trans-oceanic 3-way port., 7 bands $75; Precision 10-54P comb. tube and set tester $120; both like new guar. John Locascio, 8561 66th Road, Forest Hills 74, N. Y.

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SALE OR TRADE—Sprague Tel-Ohmike mod. 16 condenser resistor checker. Best offer. Need good tube tester. E. J. Kostelnak, 5033 S. Seeley Ave., Chicago 9, Ill.

FOR SALE—Daco tube tester, good cond. $20; Zenith auto. record changer, 33⅓ and 78 rpm $15; Federal Photo enlarger mod. 219 and 222, lens 6.3, 2¼ x 3¼ $20. J. Kramer, 229 E. 7th St., N. Y. 9, N. Y.

FOR SALE—All wave port. mod. 7G605, Zenith. Best offer over $40. Father Geffen, 550 W. 155th St., New York, N. Y.

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WANTED—Good test eqpt.: Hickok TV vidéometer, etc. Also parts, tubes and Rider's. Send list and prices. Have 2" scope, Sprague Tel-Ohmike TO-J and RF batt. sig. gen. Harry Spahr, 126 Hamilton Ave., York, Pa.

SWAP OR SALE—N. S. Radio TV Course $15; Speco sig. tracer $15; Heath G3 sweep TV gen. $20; Vomax 900; sac. for $35; all in good cond. Mr. Agostino, 223 S. Winebiddle, Ave., Pittsburgh 24, Pa.

FOR SALE—Cinaudagraph 12", mod. CIN 12-A coax. spkr., 10 w., 8 ohm, 50-17,000 cy. $10; UTC output transf. CG-16; 15 w., 3,000 or 5,000 PP to 1.5-500 ohm, 40 to 10,000 cycles at 1½ db., $7.50; both like new. John E. Thiel, 1003 No. Denver, Tulsa, Okla.

TRADE—Weston mod. 506, type 25 round meter, like new. Will sac. for DC Triplett or good make 0-1 MA meter in good cond. C. R. Watson, 306G Peabody Apts., Columbus, Ga.

FOR SALE—Eico 425 push-pull oscilloscope $40; Eico 320 sig. gen $15; Sunray Arnold mod. D enlarger with 2" and 3" lenses $52; Albert enlarging easel $8. J. Levy, 1460 Bronx River Ave., Bronx 72, N. Y.

TRADE—NC57 comm. rec., 2 yrs. old, good cond., for S-38 plus S-81, or S-40 type with long-wave band. W. B. Eddy, 10 Aberdeen Rd., Hingham, Mass.

FOR SALE—Riders 2-12 and 14 $75; battery eliminator, operates auto radio with push button $25; no. 560A Supreme Vedolizer and instr., A-1 $50. J. Shumilak, 3106 N. 76th Ave., Elmwood Park, Ill.

SWAP—Pinball machine, comp. with scoring head, coin chute, etc.,orig. cost $275; two-player rebound shuffle alley with Fly-A-Way pins. Want good tape rec. or comm. xmitter (Harvey-Wells, Stancor, etc.). Stan Cokas, 1 Acorn St., Lynn, Mass.

WANTED—Push button tuning mechanism for Delco R-699 auto radio, used in '40 Pontiac. A. G. Heinzelman, 4821 Coolidge Ave., Culver City, Calif.

WANTED—Circuit diagram for Reiner mod. 556 scope. Name price. A. H. Brook, 3737 Bellaire, Houston 25, Tex.

FOR SALE—AM-FM sig. gen., used very little, for $60, cost $110. S. Consalvo, 2507 Southern Ave SE, Wash. 20, D. C.

SELL OR SWAP—Weston hi- impedance AC volt and db meter $15; Marine RBZ pocket superhet $22; Handee grinder $12; 1/4 hp rep.-ind. motor $18; 1/2" drive socket wrench set $12. Want modulated BC221 and BC655. H. McEntee, 490 Fairfield, Ridgewood, N. J.

SWAP—Hallicrafter SR 75 trans. and rec., like new, cost $99.50 for 14" or 16" TV table mod. Must be in good cond. David Sullivan, 2 Chester Ct., Bklyn. 25, N. Y.

FOR SALE—Waterman pocketscope mod. S-10-A $30 or what have you? A. L. Friel, Capitol Sta., Bx 5163, Charleston, W. Va.

SWAP—Anchor ARC 101-100 2-stage TV booster, like new, for antenna rotator with position indicator such as Alliance DIR or Crown or Radiart. J. Zocchi, Jr., 10 Marlboro St., Exeter, N. H.

WANTED—Radio course, NRI Communications, Cleveland Institute, or Capital. H. Kleinfelder, 169 Fingerboard Rd., Staten Island 5, N. Y.

SALE OR TRADE—BC-348Q rec.; BC-375E xmitter like new with coils and dyna.; RM-7B remote control; 2 RM-29 phones; TM-11-486 man. Want MN-26 radio compass. Wm. Hansen, 165 Silverbrook, Niles, Mich.

FOR SALE—Sam's Photofacts 1-4 at low price in A-1 cond. J. J. Levine, 15-17 Kelley Square, Worcester 4, Mass.

SALE OR SWAP—Mossberg 151M .22 cal. auto. rifle, exc. cond., for Eico VTVM. Reply by letter. Don Lundy, 134-20 243 St., Rosedale 22, L. I., N. Y.

SWAP—16mm. movie proj. Kodascope, A-1 shape with metal case, 500 w. bulb; 10" table mod. Olympic TV in blond cabinet with 2-stage booster and aerial. Want sweep gen, also 17 or 20" TV table mod. of good make. John Arnold, P. O. Box 84, Bluffs, Ill.

FOR SALE—Riders 1-12, good cond., best offer. C. J. Schexnayder, 200 Shreveport Ave., Port Arthur, Tex

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SELL OR TRADE—Eico oscilloscope mod. 400; Eico TV-FM sweep gen. mod. 360, like new. $50 for both or tube tester in perf. cond. Edward Nycz, 244 E. 7th St., New York 9, N. Y.

FOR SALE—Heath scope mod. 0-6 $35, like new; N. Y. C. vicinity. Leo Perlmutter, 1 Fisher Dr., Mt. Vernon, N. Y.

FOR SALE—Intercom. system, Operadio Exec. 10 series, 3 master units and 2 remote stations; each master has 10 push-button stations—orig. cost $110 ea., asking $100 for all. Like new, best offer. L. Buddine, 4624 Old York Rd., Philadelphia 40, Pa.

FOR SALE—Arnold radio mast for permanent installation; 4 20' sections, with 2 sets guys $225. Donald K. Willim, 3622 Legation St. N.W., Washington 15, D. C.

FOR SALE—Junior Voltohmyst, A-1 fact. recond. recently, $25 plus postage. Virgil Franceschini, 708 Bigler Ave., Barnesboro, Pa.

FOR SALE OR TRADE—Linotype keyboard, with weights and new key buttons, exc. for fingering practice; bound vol. no. 1 of Radio News mag. July 1919-June 1920. Want speed key, ham rec., test eqpt. C. Park, P.O. Box 613, Gulfport, Miss.

FOR SALE—600 records, good cond.; old Decca, Victor; mostly sweet numbers, $120. Also phono osc player $8. Harry Kuell, 18 1/2 Thomas St., Newark 5, N. J.

WANTED—Tube chart for Triumph mod. 420. S. Grzybowski, 1003 Erie St., Lancaster, N. Y.

WANTED—RCA calibrator WR-39C and gen. WR59B or Hickok 610A in A-1 cond. J. E. Crowder, Willis Wharf, Va.

FOR SALE—Super Pro mod. 110 with pwr. pack, good cond. Make offer. Louis Rosenberger, 7608 Old Battle Grove Rd., Baltimore 22, Md.

SALE OR TRADE—Riders 1, 2, 4 and 6-13 in good cond.; Precision sig. gen. E-200; Electronic Designs VTVM mod. 100; battery eliminator 6 v. @ 7 a.; Sprague Telomike TO3 cap. and res. analyzer, all like new; $200 or best offer. W. T. Davis, 102 W. Woodridge Dr. Durham, N. C.

FOR SALE—Virtually comp. eqpt. for operation of powerful FM station, incl. ¼ kw GE transm., 3 kw ampl. and 10 kw ampl—$35,000 worth. Make offer. Charles Hodel, Beckley, W. Va.

FOR SALE—Mod. 170 RCA audio-Chanalyst in workable cond., comp. with instr. book and diagram, less cables. Must be picked up; will not ship; $65. L. Weinreb, 151-09 34th Ave., Flushing, N. Y.

WANTED—Pay up to $2 for instr. booklet for Solar Capacitor Analyzer Mod. CF-1-60 Exam-eter. E. B. Gordon, 1118 Barrow St., Abilene, Tex.

FOR SALE—Mod. 80 Webster-Chicago wire recorder; new mike and approx. 10-12 hrs. wire. First offer $60 or better gets it. Melvin E. Barnette, Pendleton, S. C.

FOR SALE—Turner xtal. mike mod. 22-X with stand and base, long cord with connectors, new cond. $10 PP. M. G. Wheeler, 1531 Catalpa St., Louisville 11, Ky.

SWAP OR SALE—Sam's 1-5; tapered TV mast; pre-war tubes; small radio parts; TV hardware. Want 8 mm. movie film. Wm. Bashta, 17741 Bullock St., Encino, Calif.

FOR SALE—125 hotel radios, 6-tube Tradios in good cond. Can furnish equipped with 2 hour time clocks, or with key switch, $20 ea. Meade Radio & TV Co., 2830 Fairway Drive, Birmingham 9, Ala.

FOR SALE—Precision EV-10 VTVM, megmeter, hardwood, walnut case with all stand. probes; like new, less than 15 hrs. use, $75. Will pay ship. charges. L. G. Mee, 312 Laurel Ct., Point Pleasant, N. J.

FOR SALE—Preamp, Heathkit bod. WAP1; controls: input selector, vol., crossover; inputs: 1 high gain for GE or Pickering, 2 low gain for tuner or xtal cart. Requires 6 v. @ .6 a. 200 v. at 6 a., $15 Also GE preamp $4. B. Woodward, 19 Chauncy St., Cambridge, Mass.

WANTED—Law manuals wanted by ham law student. Prefer texts on Calif. cases or on specific subjects. Will trade trans. tubes, parts and gear. Will supply list. Wm. Koczon, 100 Delaware Hall, Fort Myer, Arlington 8, Va.

FOR SALE—Precision ES500 scope, Eico mod. 221 VTVM, fact. wired, both in exc. cond., for reas. cash offer; Clough-Brengle mod. OCX sig. gen., accurate to ½% $15; Precision mod. 1280 tube tester and VOM $15. Radio Technical Service, 2821 Girard Ave., Philadelphia 30, Pa.

WANTED—Meter for Simpson mod. 220 rotoranger, or will buy whole multimeter, if reas. Alex. Atkinson, 18231 Winthrop, Detroit 35, Mich.

WANTED—Mod. railroad locomotives, cars, and eqpt. in 0 gauge. Esp. want Lionel hudson type loco. No. 773. Frederick R. Shutt, 612 Frantz Ave., Mullens, W. Va.

TRADE—Hollywood Radio & TV Institute course; Radio Electronics Handbook; Radio & TV Rec. Circ. Oper. by Ghirardi; Radio Eng. Handbook by Henney 4th ed.; Want TV course, diagrams, Riders, service books on TV, VTVM or ? Geo. Anglado, 719 Dorries, Biloxi, Miss.

SELL OR TRADE—GE 10" table TV $55; Heath mod. TS-2 TV sweep gen $39; Eico mod. 322 AM-FM and TV sig. gen. $21. Want Admiral 16" table TV, Hallicrafter rec. or AM-FM tuner with amp. G. Dalamango, 160-26 26 Ave., Flushing, N. Y.

WANTED—Schematic of McMurdo Silver Masterpiece IV using 6B5's and 6C5's in audio stages. Also uses 6K7's, 6B7, 6L7, and 85. 5F3 rectifiers. Reasonable. J. H. Oxrieder, 4612 W. Virginia Ave., Bethesda 14, Md.

FOR SALE—TV camera, sync gen. and monitor for ind. or ham use; 250 line iconoscope, 10" viewer, tripod, cables, etc. Best offer. William Jones, 319 Convent Ave., New York 31, N. Y.

SALE OR TRADE—BC-659-H 10 meter mobile FM trans.-rec. in good cond. with 6 v. DC pwr. sup like new, instr. books, $55 FOB Dayton. Want grid dip oscillator, comm. VFO, 1500 v. pwr. sup. W. J. Newill, RR 1, Spring Valley, Ohio.

WANTED—Extra film chamber for Cine-Kodak special 11 Camera. Dick Fogarty's Supply. Guthrie, Okla.

FOR SALE—BC 696-A trans., BC 457-A trans., BC 748-C rec., and WE BC 454-B rec., all like new. Make offer. Robert Lepic, 470 Mountainview Ave., Orange, N. J.

SELL OR TRADE—Triplett 2432 sig. gen.; Voltmeter mod. 100 port. multitester, like new. Accept any reas. offer. Also parts, tubes, books, tools, ½ price. Sy Genser, 2236 82 St., Brooklyn 14, N. Y.

FOR SALE—Globe King 400 w. CW or phone trans., like new; coils for all bands. Make offer. Ben Stroh, 405 So. Minnesota St., Mitchell, S. Dak.

SALE OR TRADE—Dayco Radio Corp. tube tester mod. 410, good cond. $35 or best offer. Will trade for a pistol, .22 rifle or shotgun. Jay C. Gilbert, Box 1336 Bancroft, Idaho.

WANTED—Full, correct address of Million Radio & TV Labs., Chiago, Ill. Need tube chart of company's mod. DF tube tester. Alex L. Garucia, 702 Dolorosa St., San Antonio 7, Tex.

TRADE—DC meters; car radio, like new; Rem. .22 rifle; Hurd casting rod and reel; spinning reel, fly rod and other tackle. Want tubes and 35 mm camera. Frank E. Popma, Orange City, Iowa.

WANTED—Used motors, appliances, photographic eqpt.; anything. Will allow full trade-in value toward anything new you want. Name it and I'll get it for you. Frank Tantillo, 17 Orange St., Abington, Mass.

TRADE—Your junk box parts, etc., for mine (tubes, parts or what have you). Ed. Leonard, 1035 Boynton Ave., Bronx 72, New York, N. Y.

WANTED—Meissner sig. shifter and National MB-150 final tank assy; have 7" TV and Triplett 666 multitester to sell or trade. John Green, 3927 Orchard Rd., Cleveland Heights 21, Ohio.

FOR SALE—DuKane magnetic tape rec., cost $229.50 plus tax. Best offer. M. Metzarek, 2174 Melvina Ave., Chicago 39, Ill.

FOR SALE—Late mod. Heath Kit VTVM, exc. cond., mod. V-4, $23 PP. Milton Kalashian, 2 Congress St., Newburyport, Mass.

SALE OR TRADE—BC-412 scope; BC-221 freq. meter; Traveler & GE port.; 8 and 35 w. ampl.; Simpson 260; Precision 954 VOM checker; 10" TV; Webster LP changer. Need audio gen.; 7" scope; sweep gen., 16" pic tube. John Pellock, 703 W. William, Decatur, Ill.

SALE—2 BC 611 comp. less batteries, as they are, both for $30; Junior scientific code course, Candler system, 10 lessons in perf. cond. less exam. papers $15; surplus T17B mike with Pl. 68 plug, like new $4. Rupert Freeman, 2108 33 Ave., Meridian, Miss.

WANTED—(By physically handicapped), man. for Supreme mod. 500 tester. E. M. Brown, 2929 Washington Ave., Terre Haute, Ind.

FOR SALE—5 Atlas SM-12 metal parabolic baffles for 12" spkrs., $7.50 the lot. J. Hogan, 11 Ronald Rd., Arlington 74, Mass.

SALE—RCA Victor Service Data, rev. and abr. ed., vol. I, 1923-37; 22 copies "Service," Nov. 1950 to August 1952 $2. 2 coin changers, $1.25 and $2.50. You pay postage. Joseph Di Tucci, 234 Parkway, Rochester 6, N. Y.

WANTED—10 issues of Q.S.T.'s, Dec. '15-May, '16, July-Sept., Nov., Dec., '16, Dec. '17. Joseph J. Simpson, 85-39 152nd St., Jamaica 32, N. Y.

SWAP—2 unit push button radio in good cond., for '40 Plymouth. Want good used tube checker. Henry E. Bergmann, 1637 E. 85th St., Chicago 17, Ill.

WANTED—BC 221 freq. meter in exc. cond. with orig. calib. chart. Must be bat. operated. Will pay $40 plus post. Royce I. Heintz, 3500 Woodmoor Rd., Baltimore County 7, Md.

TRADE—PA system with record player, comp. with mike and cable, all in port. case. Value $100, will trade for shotgun of equal value. John W. White, 403 Sterling Ave., Winona, Miss.

FOR SALE—Clough-Brengle OM-A freq. mod. sig. gen. and CRA oscillograph comp. with tubes, cables, cabinets, manuals; Precision E-200; Riders; National NC-44 rec. Glenn Watt, 415 W. First St., Chanute, Kans.

SALE OR TRADE—'40 Buick auto radio; '48 Pontiac auto radio. Want rec. for 30-50 mc band such as monitoradio or civic patrol. W. E. Fuller, 4620 Stafford Rd., Lansing, Mich.

WANTED—February 1949 CQ. Will pay $1 for clean complete issue. Robert M. Morgan, 2856 Norwood Blvd., Birmingham 4, Ala.

FOR SALE—Daco tube tester no. 606, ser. no. 1669, with 9 pin socket plus all the other, $22.50. J. S. Pederson, Walnut Grove, Minn.

WANTED—Early 1921-22 radios; music boxes: disc, cylinder, or paper-roll oper. Edison cyl. phonographs; Berliner disc records and machines, 1890-1903; daguerreotypes. Cash or trade for ham gear or rare records. J. F. Geilenkirchen, 14 Valley Rd., White Plains, N. Y.

WANTED—Latest NRI kits on radio servicing or books telling how to build kits. State price. Wayne Sines, R.R. 1, Box 362, Oakland, Md.

SELL OR SWAP—Brown sprayer; 8" tilt-table saw, both hardly used. Want typewriter, sewing machine, record player, tape recorder, movie camera. H. Schneider, 9409 Ave. A, Brooklyn, N. Y.

SALE OR SWAP—GE filament transf., 100 v. primary, 2.54 @ 40 a. secondary, 3 kv insulation, B&L f 1.9 TV lens. Oppert-hauser, 1875 Banbury, Birmingham, Mich.

SELL OR TRADE—Webster-Chicago wire recorder and 7 spools wire, exc. cond., for best offer or comm. rec., ham gear. Louis A. Josephson, 313 N. McLean St., Bloomington, Ill.

SWAP—Masco mod. 50 50-watt ampl. in good cond. for Hallicrafters S-56 or similar FM-AM chassis. A. K. Guthrie, Jr., 618 W. 4th St., Seymour, Ind.

SALE OR TRADE—Zeiss-Ikon 2¼" x 3¼" folding camera: solenoid flash, Hugo Meyer range finder, f 1:3.5 10.5 cm Novar lens, Compur shutter. Exc. cond., valued at $95. Trade for tubetester and other test eqpt. Clarence Dorn, 4115 Archwood Ave., Cleveland 9, Ohio.

WANTED—Instr. man. for Collins 32RA-7 trans. and Howard BC-779A rec. G. Karalow, 318 W. Fearing St., Eliz. City, N. C.

FOR SALE—Sam's Photo-Folders 1-10 in hard cover binder, new cond. Best offer takes it. Samuel T. Chase, 19 Kafka Drive, Dunellen, N. J.

FOR SALE—BC-610 trans., good op. cond., used little. Crated FOB. Keith L. Curtis, Royal, Neb.

FOR SALE—Decimeter DM-240-A, comp., full instr., $30; RCA 5-tube port. radio no. 65BR9, AC or bat. oper.; new battery $15; 2 Rek-o-cut 16" turntables, 33 and 78 rpm. Similar to mod. G-Z, $45 ea. R. Flory, 715 E. Buffalo St., Ithaca, N. Y.

SALE OR TRADE—Lady's 3 diamond blue white ring, total .75 carat, set in white gold. Want good comm. rec., typewriter, camera, 8 mm. movie proj. or cash. W. Lachapelle, 1905 Salem St., No. Andover, Mass.

SWAP—RCA 10" TV set for VTVM or scope or what have you? Ralph Chalom, 132-21 87th St., Ozone Park, N. Y.

SELL OR TRADE—Heath O-6 scope used about 10 hrs., with extra C-R tube; Hallicrafter S-38 fair cond. Want Hallicrafter S-40 or S-20-R, or similar rec. John C. Strole, 18 Cooper Pl., Weehawken, N. J.

SELL OR SWAP—GE air compressor for good tube tester. Want spkr. grill for Silvertone radio mod. no. 3361 or comp. radio. Geo. Mashek, Marisse, Ill.

FOR SALE—Mimeograph machine with acc. in perf. cond., takes legal size sheet $50; Intercom system, 6 station master, 3 remotes, good cond. $40. Prefer local deal. B. Meyer, 1435 E. 21 St., Bklyn. 10, N. Y.

WANTED—TV test eqpt. Have TV sets, 10", 12", 16". Troch's, 290 Main St., Spotswood, N. J.

WANTED—CREI Advanced Math. & BCL course; tube tester. Will buy or trade binoculars, old violin, Weston VOM, Simpson AC meter, steamer trunk, 20" slide rule, crystals, pair 7" ebony elephants. P. Ott, 507 Juniper St., Quakertown, Pa.

TRADE—Audax L-6 triple play magnetic cartridge plug-in, like new, for Webster auto. phono, costs $22. Would like 3-speed turntable, not auto., and triple play crystal arm or what have you. C. Schmitz, 4737 Matilda Ave., Bronx 70, N. Y.

WANTED—Hallicrafter SX-43 and matching R-44 spkr. Will give fair price depending upon cond. Will pick up within 150 mi. of Allentown. Harry M. Langan, 1611½ Turner St., Allentown, Pa.

SWAP—8 vol. self instructing library practical photography, by Amer. School of Art and Photography; 5 vol. Pictorial History World War II; book on photographic kinks and gadgets. Want radio and test eqpt. C. Hambro, 204 Columbia Rd., Dorchester 21, Mass.

WANTED—Used radios in any cond., also radio parts and eqpt. Edwin Lee Herman, 2479 Shirley Ave., Baltimore 15, Md.

WANTED—6 v. or 12 v. radio telephone system suitable for small boat. Must be crystal controlled, at least 4 channels, one must be Goast Guard freq. Ted Nevola, 146-50 N. Y. Blvd., Jamaica 5, N. Y.

FOR SALE—Feiler stethoscope mod. TS-3A, like new; tube checker, Superior mod. 1240; Solar capacitor analyzer mod. CB-1-60; .44 revolver, all for $50. Oswald Maillet, 5 Emerald St., Gardner, Mass.

WANTED—"Audio Engineering" magazines for Dec., 1948, Jan.-Apr. and Nov., 1949, Oct.-Dec., 1950, and Mar., 1951; Mar. and Apr., 1947 issues of "Radio." State lowest price. I. O. Ebert, E. E. Dept., Mich. State College, East Lansing, Mich.

SALE OR TRADE—Several port. and AC-DC radios; also several good radio and TV books, very reas. Want good AC-DC electric drill. Send stamped envelope. Alvin Kriegel, 701 Crotona Park North, Bronx 57, N. Y.

WANTED—Hickok tube tester 600A or 605; Simpson FM-TV genescope. Otto P. Wong, 514 Frederick St., San Francisco, Calif.

SELL OR SWAP—Meissner mod. EX deluxe sig. shifter in perf. cond. with parts or cash for Hallicrafter HT-18 in good cond. or will ship for $60. C. G. Stuart, 141 Whiting St., Toledo 9, Ohio.

FOR SALE—General Radio Variac mod. 50-A, like new; input 115 v., output 0-135 v. or 0-115 v., max. current 45 a., load rating 5,000 va. $100 or best offer. Harvey's Radio Service, 200 Stonecliff Dr., Rochester 16, N. Y.

FOR SALE—QST 1930-47, CQ 1947-50, 25c ea.; Radio News 1947-52, 15c. Want good VFO all band. T. Kelley, RFD 3, Mendon Rd., North Smithfield, R. I.

WANTED—5" scope, must be reas. Will pay cash or ? Andrew Dorato, c-o Troast Farm, Sicomac Ave., Wyckoff, N. J.

TRADE—DeForest Radio and TV course comp. with kits. Want wire recorder or what have you? Bruce Psimer, 17486 St. Aubin, Detroit 12, Mich.

TRADE—'41 Buick auto radio in exc. cond. for Heath 5" scope or '40 Plymouth auto radio. Chambers Radio-TV, 255 Long Lane, Upper Darby, Pa.

FOR SALE—Tube tester Supreme mod. 589-A, checks any recent tube, 4, 5, 6, 7 pin, Octal, Loctal, 7, 9 pin min., pilot light, $40 or best offer. E. L. Summers, 5728 5th St. NE, Washington 11, D. C.

FOR SALE—1952 Midwest super del. custom mod. KD-16 ser. AM-FM short wave rec. and 12" spkr, mounted in Philco cabinet $100, exc. cond. Dent T. Barnes, Jr., 307 Mosher St., Battle Creek, Mich.

SALE OR TRADE—BC-696 and heavy duty pwr. sup. and control unit $40; 10 meter beam $10, or trade for comm. rec. in any cond. R. W. Bowman, Rt. 1, Berrien Springs, Mich.

FOR SALE—Filament transf. Thordarson T-21F19, 11 v. (c.t.) 10 a. or 10 v. (c.t.) 12 a., $4. Must be picked up. L. Matushefske, 2 Elmont Rd., Elmont, L. I. N. Y.

FOR SALE—Meissner 8c FM tuner with cabinet, like new. Joseph Blumenstein, 3 Pier St., Yonkers 5, N. Y.

FOR SALE—Hallicrafter SX42 and R42 spkr. $200. Ed Blasic, 1814 A Dr., Erie, Pa.

SELL OR SWAP—1947 Chek motorcycle, fair cond. Want a comp. ham mobile rig. V. M. Hendricks, Box 332, Granby, Conn.

FOR SALE—BC 610E comp., exc. cond., 6 final tank coils through 80 meters, tuning units 1.7 kc through 30 mc., manuals, xtals, ant. relay and RCA kw. mod. xformer and HV pfr. xformer for conversion to a kw, $695. M. Freedman, 144-34 72nd Dr., Flushing 67, L. I., N. Y.

WIRING: Test instr. kits wired: VTVM, generators, tracers, checkers $7.50 ea; oscilloscopes $15. Satisfaction guar.; kits usually returned same week rec'd. C. W. Chastain, 228 Timber Lane, Memphis, Tenn.

FOR SALE—Riders 10-15 and 3, like new, $65. You pay express charges. Make offer for separate vol. G. J. Mackenzie, 1948 Lewis Mt. Rd., Charlottesville, Va.

SALE OR TRADE—Browning BL-FM frek. meter, calib. for ham bands to 60mcs. 100 and 1000kc stand. inc. Exc. cond., with instructions, $25 or mobile ham gear. Thomas Korn, 4412 N. Milwaukee Ave., Chicago, Ill.

WANTED—Good NC 183 or NC 173. Would consider any 12 or 14 tube rec. E. C. Whitaker, 3006 Elgin Ave., Baltimore 16, Md.

SALE OR SWAP—U.T.C. S-52 transf., cost $15; Inter-matic TS-41 time switch, will handle 35 a., cost $13; 5 2-lamp 40 w. fluor. fixtures, less lamps, but with chain hanger fixtures and pull chain switches, cost $25 ea. Want a good scope. Make offer. Metairie Electronics, 730 Homestead Ave., Metairie 20, La.

WANTED—Riders 1-21, must be in exc. cond. State price. Roger P. Koch, 1728 E. Iron St., Milwaukee 7, Wis.

TRADE—Clough-Brengle mod. 110 sig. gen.; Hickok VTVM mod. 110. Will trade for photo eqpt. or what have you? Miller Radio Service, 302 Virginia Ave., Bluefield, Va.

FOR SALE—Sig. gen. Hickok mod. 19XD, crystal controlled, output calib. in microvolts, like new $45; Link mobile 30 mc xmtr with tubes less dynamotor $10; BC-453 like new, $20; 829's, 3E29's, 4-125's. Weston mod. 697 pocket VOM $15. I Seidman, 1535 Longfellow Ave., New York 60, N. Y.

SELL OR TRADE—Supreme audolyzer, mod. 562, comp., perf., with instr. book, like new; also Model Railroader magazines, catalogs, 1937 to 1952, some bound. Need sweep gen., typewriter, Hallicrafter SX-28A, cash, or what? Henry Cordes, Aurora, N. C.

FOR SALE—Eico mod. 221, like new $25. M. J. Sadofsky, 38 Mariposa St., Mattapan 26, Mass.

FOR SALE—KW trans., late design 10-20-75 meters, best components, mounted rack cabinets, best quality on air. Sale due to death of owner. Worth 3 times sale price. J. Herbert Orr, Consulting Engineer, Box 389, Opelika, Ala.

FOR SALE—Williamson hi-fi amplifier, in use a few months; separate pwr. sup. chassis. First check for $75 or best offer takes it. Shipped prepaid. H. Malamud, Box 24, College Park, Md.

FOR SALE—Jackson no. 637 tube and multitester; Precision E200; VTVM mod. 100, all in perf. cond., also over 100 radio mags. and 25 tubes, all for $100 cash. M. Berlot, 92 Second Ave., N. Y. 3, N. Y.

SELL OR TRADE—12 w. Lafayette PA amp., 2 6v6 P.P. $12; General Ind. recording panel with hi and lo impedance cutters $15; Shure Stratoliner xtal mike $10; Speedx bug, like new $5. Want 7" com. TV. Wm. Gieckel, 22-48 41 St., Astoria, L. I., N. Y.

FOR SALE—10" Philco TV, mod. 49-1040, good cond., new set of tubes, $40. S. Pollack, 310 E. 4th St., N. Y., N. Y.

FOR SALE—Mod. 795 Fada FM tuner in good cond. $15; mod. T601A Pilotuner, like new $25; 2" Sprayberry 0-1 ma. foundation meter, never used. Best offer. G. W. Winter, 14316 Sherry Ave., Cleveland 11, Ohio.

SELL OR TRADE—Rider vol. 2, 4, 5; Pilotuner converted to AC-DC; 150 w. DC-AC inverter; Heathkit VTVM with HF probe; panel meters; Weston output meter; Weston lab. v.m.; others. Need sweep gen. F. J. Goldwater, 572 Broome St., New York 13, N. Y.

FOR SALE—SX-42, fact. realigned like new, $199; GR583-A power output meter, fact. checked, $85; HRU28A gen., like new, $100 or trade for 110AC GE BFO YGA-4 $25. Want Hewlett Packard, GDO, sig. gen., Hi-fi eqpt. H. E. Housholder, 1627 Emerson St., Beloit, Wis.

SALE OR SWAP—Test eqpt.: RCA VOM, Gen. Electronic sig. gen., Superior sig. gen., Heath voltmeter. Will trade for photog. eqpt.: enlarger or reflex camera double lens, or best cash offer. B. Windreich, 19 E. Van Cortlandt Av., Bx., N. Y.

FOR SALE—Sig. gen. I-198-A $15; freq. meter BC 438 $20; SCR-522 $50; phase inverter MC-411A (4 7V7 tubes) $4. All units comp. with tubes. Want tube tester; LCR checkers; thyratrons. Paul Kilpatrick, 1030 Curtis St., Albany, Calif.

WANTED—RCA KW mod. transf. with screen windings; pr. 811 mod. 813's RF amplifiers. State price and cond. Judge Glanzer, Box 307, Bridgewater, S. D.

WANTED—APR-4, other APR-, APS-, ARC-1, ARC-3, ART-13, BC-348, BC-221, etc. TS-12, 13, 35, 45, 120, 146, 155, 173, 174, 175, 323, other TS-, particularly Microwave equipment. Littell, Farhills Box 26, Dayton 9, Ohio.

SALE OR TRADE—"Electrical Engineering" magazine, comp. from Jan., 1942 to Nov., 1952. Make offer or will trade for surplus field glasses in good cond. J. Harrigan, 1919 N. Maple St., Burbank, Calif.

WANTED—DuMont 185-A electronic switch and square-wave gen.; DuMont 264 v. calibrator. Both must be exc. cond. and unmodified. Also Hewlett-Packard 200 A.B. or 201B audio oscillators. Will consider Jackson 655. R. D. Mattis, 634 No. Grand Blvd., St. Louis 3, Mo.

WANTED—Units 5-9 of the RCA Institutes TV Course. Lesson assignments not needed; must be in good cond. State price wanted per unit. Lewis Lounsbery, Valley Radio-TV Service, Box 80, Stone Ridge, N. Y.

TRADE—Hickok 277x, like new, for 4 x 5 Crown Graphic or Busch Pressman, synchro shutter, coupled range finder. Local preferred. W. Lazovick, 128 Spring St., Passaic, N. J.

WANTED—Operating and service manual for Nation HF rec. no. NC-100 ASD. R. Dodge, 7466 Oxford Ave., Philadelphia 11, Pa.

SALE OR SWAP—For test eqpt.: Edison "Amberola" record player, Patd. 1903. Have several drum records to fit, spring driven, good mechanically, in orig. cab. Plays well; size 12 x 16". Make offer. O. V. Howell, P.O.B. 463, Mars Hill, N. C.

FOR SALE—BC 453A $10; Class A speech ampl. for high power mod.; push pull parallel 2A3's deliver 30 w. audio through UTC PA 238AX Universal output transf.; low level clipper-filter, tubes, and separate pwr. sup. $30. S. C. Macy, 2412 Broghton, Louisville, Ky.

FOR SALE—National NC-173 rec., perf. cond. $115; Riders 1-6, $4 ea. or all for $20; pr. 832a tubes $4 ea. All parts for 1250 v. 550 ma. pwr. sup. $35. R. Wagner, Box 281, Waterford, Mich.

SELL OR TRADE—Liquid petroleum conversion kit for engines to 150 hp, with gasoline transfer switch and tanks, never used, value $150; Scott 12-tube chassis and spkr. 540 Kc-22 mc in 4 bands, value $40. Want comm. rec., TV, AM, FM sig. gen,. Gonset or ? F. M. Van Campen, 2303 Waite Avenue, Kalamazoo, Mich.

WANTED—Oper. instruction for Solar capacitor analyzer, type CC-1-60, ser. C-5445. W. C. Goodrich, 214 44th St., Bklyn. 32, N. Y.

FOR SALE—Hickok 156 traceometer and all cables in new cond. Best offer. W. B. Sanford, 560 Walnut St., Fall River, Mass.

TRADE—Radio tubes and Sam's Photofacts 1-33 and 38-43 for U. S. and foreign stamps. Joseph Palmer, 786 E. 94th St., Brooklyn 36, N. Y.

WANTED—All types of clean, new and preferably boxed rec., trans., and special purpose vacuum tubes. Nat Adelman, 168 Washington St., New York 7, N. Y.

FOR SALE—Motorola Station house rec. B19-19 $35; BC224, circuit untouched $40; Lysco mobile vfo like new, $20 FOB, prefer local. Dan Damrow, 5331 W. 79th St., Oak Lawn, Ill.

WANTED—Comp. mobile rig, tape rec., power tools, movie camera, test eqpt., appliances. Will swap movie projectors, ham gear, meters, TV booster, converters, enlarger, text books. Joseph Leeb, 1380 Merriam Ave., Bronx 52, N. Y.

FOR SALE—33⅓ rpm elec. playback; Teleplex code keyer OSC unit; BC 455-B AC, 6 w. speech amplifier; electronic keyer; Eldico TVD 62 low pass filter; McElroy elec. tape puller. Cash or swap for 150 w. modulator, guns or Argus 3. H. E. Leigh, Sr., 197 N. 14th St., San Jose 12, Calif.

FOR SALE—Inverter, Navy mod. M-12551 comp. with vibrator, 115 VDC, 115 AC, 150 w., $15; antenna loading coils CAY-47125 with 4-position switch, $2.50; SCR-522 comp. with tubes, $50. Want tube tester. Paul Kilpatrick, 1030 Curtis St., Albany, Calif.

SALE OR TRADE—Weston megohmeter 796, like new; insulation leakage resistance tester, batt. oper., comp. components for AC oper., unwired, like new, $100 or trade for mod. high power rifle. Clement E. Muck, 1951 N. Russett St., Portland 17. Ore.

WANTED—RCA mod. K80 chassis comp.; 1947 Hudson Super 6 custom radio, any make. State cond. and price in first letter. John J. Hartenstein, 1 Fifth Ave., Brooklyn, Baltimore 25, Md.

SELL OR TRADE—32 mm enlarger; developing set; phono turntable; NRI course; dynamotor; stamp collection; multitester; tube tester; compressor, hose; controls. Want rifles and pistols or cash. Thomas R. Rohland, 126 W. Milford St., Mt. Union, Pa.

SALE OR SWAP—Webster Whitcomb jewelers lathe with motor, foot rheostat, 35 chucks $75, or trade for S&W 357 Magnum 3½" barrel in good cond. Louis H. Byrom, P.O. Box 55, Pacific, Mo.

WANTED—16" 2-speed transcription play back eqpt., port. preferred. Must have turntable and pickup in good cond. Amplifier and equalizer not nec. but desirable. D. W. Richardson, Box 148, Stinnett, Tex.

WANTED—Stub antenna for TS 69 AP freq. meter. S. H. Larson, 14 E. 30 St., New York 16, N. Y.

SALE OR TRADE—Long list new books, magazines, ham and broadcast parts, tubes, etc. Prefer cash, but will trade for Ampro or DeVry 16mm SOF proj., top grade ham rec., 630 type TV chassis. Send list. Eddie Howell, Chief Engineer, WTSB, Lumberton, N. C.

FOR SALE OR SWAP—12½" Emerson TV consolette for Cine Kodak mod. K 8mm camera. Also Admiral and Webster-Chicago 78 rpm auto. record changer, 10" or 12" records $15, or what have you? Louis D. Mingan, 308a Watertown St., Newton, Mass.

WANTED—Dynamic mutual conductance tube tester, pref. late mod. in good cond. W. G. Gaboda, 1009 N. Washtenaw Ave., Chicago 22, Ill.

WANTED—Rider Chanalyst and a signal tracer, both in good cond. Cash or trade good picture tubes like 16GP4, 10BP4, 17GP4, or 12LP4 for test eqpt. M. Roman, 1464½ Sherwood Ave., N. Tonawanda N. Y.

FOR SALE—12 7" Teletone TV chassis less all tubes, in good cond. $10 ea. Includes front end and all parts. A. Ignal, 5325 205 St., Bayside 64, L. I., N. Y.

SALE OR TRADE—Want TV chassis, car radio, and 35mm camera. Will sell tubes, AC-DC sets, color film(8mm eqpt., binoculars, cheap. Jim English, S. 515 Audubon, Spokane, Wash.

FOR SALE—Riders 1-12 $8 ea.; TV man. no. 2 $18; University PH trumpet with MA25 25 w. spkr. $20; stock of TV tubes, $1 ea.; some Weston and other meters, all perf. M. Leitch, 34 Park Dr., W. Orange, N. J.

SWAP—3½ hp outboard motor for SCR 522, BC 733, BC 645, other aircraft radio, or what have you? Bill Romain, 28 Avon Pl., Staten Island 1, N. Y.

FOR SALE—Teleplex, elec. driven code machine; cuts and plays back tape. Six practice tapes incl., $48. A. F. Hanson, 2238 E. 29 St., Brooklyn, N. Y.

WANTED—H.V. transf., approx. 1,000 or 2,000 v. (don't need C.T. or filament windings). Send self-addressed envelope for bargain swap list. Lefferson Radio, 405 S. Walnut St., Bloomington, Ind.

WANTED—Used radio and TV books, courses, manuals, etc. National Radio & TV Service, 1532 Pleasanton Rd., San Antonio 5, Tex.

SALE OR TRADE—Iver Johnson 12 ga. shotgun, single bar. $10; Higgins 12 ga. pump 6 shot, with cleaning kit, cost $70 last yr. $45. Want tube tester and VOM or comb. Paul J. Wesner, Box 231, Green Ridge, Del. Co., Pa.

TRADE—Radio text books, sig. gen. or Radio Course by C.I.R. for oscilloscope. R. Julian, 337 S. Third St., Steelton, Pa.

SALE OR SWAP—Five Japanese meters, ranges 0-100 micro-amps DC, 0-80 ma, 0-15 a. DC, 0-2 a. DC, 0-6 a. DC. Want test eqpt. J. Willis, 271 S. Washington St., Wilkes-Barre, Pa.

FOR SALE—Precision sweep gen. E400 like new, list $135. Best offer. Noank Marine Exchange, Stonington, Conn.

FOR SALE—Meissner 80 FM tuner $18; Heathkit scope 0-6 $25; tube checker TCI $15; audio gen. G2 $15, all like new. Frank Schlicker, 574 60th St., Brooklyn 20, N. Y.

FOR SALE—Pair of Eimac 4-250A, like new, 2500 v. DC 650 ma. Thordarson plate transformer; also other parts for hi-pwr. rig. Send for list. A. Martinka, 1253 Grace St., Chicago 13, Ill.

FOR SALE—Throat mikes $1 ea. PP.; telegraph keys, mounted, black base, $1.50 pr. PP. Want telephone and teletype parts of all kinds. Standing offer. C. Sass, 1445 8th Ave., Sacramento, Calif.

FOR SALE—120 w. VFO 40 meter xmtr. converted BC-459A with custom built 525-250-250-12.6 v. reg. cabinet pwr. sup., tuning unit, comp. set spare tubes, shielded cables, parts, diagrams, all like new $55. Roger Hoestenbach, 601 N. Lasseter, Odessa, Tex.

SELL OR SWAP—Stromberg Carlson 2000 ohm headset, 20 BVL trans. coil, Webster-Chicago 1 hr. rec. wire, Cat. W-175, $1 ea. FOB. Can use 7mc xtals. Box 142-G, RD 1, Sparta, N. J.

TRADE—5 hp Ward's Sea King outboard or 4½ hp Martin outboard like new, used about 20 and 15 hrs. resp., for 16 mm camera in good cond. Want Bolex Deluxe, Grover Turret. Also have other items. William H. Roesler, Box 26, Lavina, Mont.

FOR SALE—Comp. port. Lafayette PA; amp. mod. 419, 2 dual spkrs. (Jensen) with sturdy cases; ST-601 Cordioid mike mod. 55B, 400' cord, $125 or best offer. T. Barrie, 64 Bristow St., Saugus, Mass.

TRADE—Rec. TV and radio tubes, rotator, field strength meter, tube tester, VOM, pattern gen. Have 300 ohm lead-in 20-55, port. radio, addresser. Ben's Radio, Nash Rd., No. Tonawanda 2, N. Y.

WANTED—7" or 8" TV, key cutting machine or locksmith supplies. W. H. Norman, 112 Douglas Ave., Rockwood, Tenn.

FOR SALE—National SW-3 short wave rec. with coils for 10-20-40-80 meters all working OK; price less power supply $20. Don Guptill, 17 Park St. Ct., Medford 55, Mass.

SALE OR TRADE—Navy rec. mod. RAK-7 with 110 vac power supply for cash or test eqpt. G. S. Garrigan, 724 Suburban Rd., Union, N. J.

FOR SALE—Heath V-4A VTVM, perf. cond. $20; pinball machine with flippers, everything works $20; Popular Science 1946-1952, best offer. David Dillon, 1253 Fennimore St., Fairmont, W. Va.

FOR SALE—5" scope 5BP4, converted BC-412 Echo Box, wt. 150 lbs., useful range 100 m. cycles, sensitivity 0.05 v. vert. 0.5 v. hor. Best offer. R. Keithley, 156 Stewart Terr., Totowa Boro, Paterson, N. J.

FOR SALE—Knight Ocean Hopper comp. with coils in good cond. $13 PP.; Progressive EDU radio kit in good cond. $12 PP. Want tube tester. Donny Roach, Box 93, West Graham, Va.

FOR SALE—SE-1420C rec. 250-7500 meters with ampl. and pwr. sup. Best offer takes it. M. C. Ernst, 3 Vannoy Ave., Pennington, N. J.

SALE OR TRADE—2500 v. 400 ma well-filtered pwr. sup. also 813 and comp. final ampl. parts. Want HiFi, recording, and photographic eqpt. Tob Hyltin, 605 Park Pl., Austin, Tex.

WANTED—Johnson Viking transm. in good cond.—mod. I or II. Thomas G. Ravesi, Jr., 99 Rockridge Rd., Waltham 54, Mass.

WANTED—Aircraft radio, SCR522, BC733, etc. Have outboard motor, port. typewriter, and misc. radio eqpt. Bill Romain, 28 Avon Pl., Staten Island, N. Y.

TRADE—Riders man. 1-5 abr.; 6, 7, 12, 13, 15, 16; RCA man. 1 and 2 and Philco comp. to 1947. Want SW receiver. W. H. Jones, Jr., 13 18th St., Green, S. C.

FOR SALE—Ghirardi "Modern Radio Servicing; Rider "Servicing Superheterodynes" and "Aligning Philco Receivers" vol. 1 and 2. $5 for the four. Allen E. Sweigert, 30 N. 4th St., Cressona, Pa.

CASH OR TRADE—Highpower transmitting eqpt. or coin oper. juke boxes or cash for RCA WR-39 TV calibrator and WA67 oscillator. Benny's Radio & TV Service, 384A Warren St., Roxbury, Mass.

FOR SALE—Handbook maintenance Instructions Radio Compasses MN-26A, CA, C, M, W, X, Y $2.50; variable wave trap 80 to 300 mc. navy type F-19/UPR $2.50; BC-625AM transm. mounted on 10½" by 19" steel panel $30. E. J. Mack, 82 Broadway, Bayonne, N. J.

FOR SALE—RCA master Voltohmyst WV-87A, used only few hrs. $90; Jackson electronic VOM mod. 645 $35; GE lab.-type resistance-capacitance checker, model YCW-I $40; Hickok tube tester mod. 533 $125; all perf. cond. N. Kulke, 19620 Pasnow Ave., Euclid 19, Ohio.

TRADE—Good used and new table radios for cameras and binoculars. Will pay cash for good used 7" TV if cheap. Elvin L. Holley, Box 336, Vaughn, N. M.

FOR SALE—TV-Radio Sales & Service store, operating 26 yrs.; ideal location, near bus stops, right at end of shopping center. Paragon Radio Service, 170-26 Jamaica Ave., Jamaica, L. I., N. Y.

FOR SALE—Astatic FLC pickup, 2 crystal cartridges, diamond stylus, Astatic filter, Stancor output A-2313-10 w., Weston 665 selective analyzer. J. Holloway, Cent. YMCA, 1421 Arch St., Philadelphia 3, Pa.

HELP—Request assistance of fellow hams and experimenters in my project on history of popular music. Please send me your unwanted sheet music, any age. I will refund packing and shipping costs. H. Gross, 727 E. 10th St., Bklyn. 30, N. Y.

SELL OR SWAP—Ham eqpt. and parts; war surplus units, CR, xmitting and receiving. tubes; dynamotors, transf.; meters, condensers; radio, photo, medical books; photo, chemical eqpt. Make offer. A. Zambakian, 1259 Gaylord, Denver, Colo.

SALE OR TRADE—2 meter Handy Talky, only have one, 2-958-A's and is regenerative hand made. Want Command rec. or $15 and you pay postage. Howard Haftel, 1651 Montgomery Ave., Bx. 53, N. Y.

FOR SALE—Revere T-200 tape recorder, with radio and dynamic mike, exc., $125 FOB. Pat Phillips, 311 Penfield Place, Rockford, Ill.

FOR SALE—RCA radio-phono comb. mod. RE 45, good cond. Best offer. S. Ferguson, 3029 Briggs Ave., Bronx, N. Y.

FOR SALE—Hickok mod. 209 volt-ohm-cap. milliamp meter, like new, comp. with leads and instruction book $75. Ed. Slusarski, 3520 W. 49th St., Cleveland, Ohio.

WANTED—Back issues of High Fidelity and Audio Engineering. Jack Blum, 1656 Cherokee Ave., Hollywood 28, Calif.

TRADE—European .25 cal. auto. pistol; National NC33 rec.; Electro voice dynamic hi-z ohms mic.; 1-speed record changer; 1-speed Gen. Industries recorder. Theo. Thalis, Apt. 302, 25 Kennedy St. NW, Washington 11, D. C.

TRADE—Transmitter crystals 5706, 6040, 6406.7, 6673.33, 7340, 7844, 8006, 8306 kc's. Want VTVM or parts. W. McKay, 163A Langfield Dr., Buffalo 15, N. Y.

SALE OR SWAP—South Bend 21 j. RR watch, gold case; CB-160 capacity tester; TU9B tuning unit, 0-1 mill.; Merit P3158 plate transf.; Simpson 240 in leather case; 813 $5. All in good cond.; make offer. L. M. McGee, 501 E. Wyatt, Herington, Kan.

TRADE—Hallicrafter mod. S51 for 16 mm sound proj. or 1/4" electric hammer. M. Schwartz, 317 Pulaski St., Bklyn 6., N. Y.

WANTED—Precision 864 panel type voltmeter. State price and cond. Precision Service Co., 2 No. Quincy St., Brockton 58, Mass.

FOR SALE—NRI Radio-TV Course with radio, and NRI Comm. Course with trans. built. Make offer. Carl Briggs, Rt. 1, Dandridge, Tenn.

FOR SALE—RCA mod. 8T-244 10" TV, perf. cond., very easily conv., good output, mahogany cabinet, matching table. Real bargain; make offer. B. Fogelman, 227 Riverdale Ave., Brooklyn 12, N. Y.

WANTED—Precision E-200 C sig. gen and Vomax or other good VTVM. Both in perf. shape and with instr. man. Must be reas. priced. L. Polikoff, 176 Quentin St., Brooklyn 35, N. Y.

WANTED—Tape recorder and 630 TS RCA 12" or 10" TV chassis, must be reas. J. O. Hehn, 204 York Rd., Towson 4, Md.

TRADE—Stevens .30-.30 rifle, 3-clip mag., never used, ammo and cash for Twin Trax or other tape recorder. Also want 16 mm proj. H Hoch, 418 E. 53rd St., Brooklyn 3, N. Y.

SWAP—Numerous items incl. NRI Radio-TV Course, taxidermy course, and other items, for H.O. railroad eqpt. or what have you? Don A. Lake, 3601 Myers Ct., Jackson, Mich.

FOR SALE—RCA sig. gen AM, Meissner analyst, Simpson 20,000 ohm VOM, Sylvania 120 tube checker, all for $125; Precision rack mt. multi-tester $39.50; Seeburg port. rec. chgr. and case $34; Emerson fan and heater $17.50; Scott Radio Appliances, Benld, Ill.

SALE OR TRADE—Recently recond. Underwood typewriter, stand. size, for good scope, sig. gen. or $25. Morris E. Jacobs, 371 E. 179th St., N. Y. 57, N. Y.

TRADE—Deluxe tape rec. comp. with radio and phono for Hallicrafter SX-42; trade SG-6 sig. gen. like new for late model scope, kit form or assembled, and cash. Walt Bartell, 1107 N. Western Ave., Chicago 22, Ill.

FOR SALE—Mod. 200 tube checker, checks all late type tubes; perf. cond.; make offer. Greiner Radio Service Co., 114 Elmwood Ave., Buffalo, N. Y.

SALE OR TRADE—Deforest radio course, Rider rec. changer man., 1 yr. Electronics beg. April '42, Practical Radio Commun., Nilson & Hornung, misc. Radio News magazines, coax connectors. D. C. Harrington, 2137-D 43rd St., Los Alamos, N. M.

WANTED—R'9er with 10 meter coil. M. Javerbaum, 613 18th Ave., Newark 3, N. J.

SWAP OR SELL—Comp. manuals, spare 832 tubes with BC522 rec. and trans. What do you have? Leon A. Wortman, 25 E. Tenth St., New York, N. Y.

FOR SALE—87 issues of QST from 1939-1949 with four binders $10 plus shipping; 67 issues of Radio Craft and Radio Electronic News from 1946-1951 $5 plus shipping; photo lab. eqpt., trays, tanks, etc. V. Johannes, 1541 Metropolitan Ave., Bronx 62, N. Y.

FOR SALE—Riders 1-21, TV-1 and TV-2, PA-1, like new, some never used. Will sell one or all at half orig. cost. Geo. H. Gable, 129 Edgar St., York, Pa.

WANTED—Good prof. built trans. for 420 mc. or 220 mc., around 30 w. output, plus pwr. sup., less tubes. J. Zukauskas, 2227 Germantown Ave., Philadelphia 33, Pa.

WANTED—16 mm. proj. and 16 mm films, black and white or color; must be in fair cond. Ship exp. coll. ins. for inspection. Give price or what you want in trade. R. N. Eubank, 1227 Windsor Ave., Richmond 27, Va.

WANTED—Gasoline driven gen., 110 v. 60 cy. AC, 500 to 5 kw, pay cash or trade radio parts. Al. Foley, 4192 W. 143 St., Cleveland 11, Ohio.

WANTED—Oscilloscope, good work. cond. and reas. priced. Write details. E. F. Nowak, 1401 S. Austin, Brenham, Tex.

SWAP—21 jewel Bulova wrist watch needing main spring; Sentinel Jewelbox 3-way port. radio, needing batteries. Want port. Burroughs 8-bank adding machine with subtract bar. Vincent O. Greene, 702 No. Randolph St., Champaign, Ill.

SALE OR SWAP—Heathkit VTVM; sig. gen.; sig. tracer; Supreme 599A tube and multimeter. All with manuals and leads. Best offer takes all. G. E. Cline, Gen. Del., Boise, Idaho.

SALE OR SWAP—30 used TV sets all in good work. cond.; RCA 10" and 12"; GE 10" and 12"; comb's; RCA 630TV 15". Want cameras, projectors, recorders. Sid, Stanhope Appl., Stanhope, N. J.

WANTED—By collector, comm. radio and wireless rec's more than 30 yrs old. Will pay highest prices. Give description. A. C. Budenkaye, RFD 1, Box 544C, Red Bank, N. J.

FOR SALE—Norelco Duo-View TV proj. unit, mod. PAAZ, for any TV rec. with EM defl. and cathode mod. kine. A-1 cond., with all instr. and 30x40 radiant beaded screen. First $100 FOB takes it. J. Zocchi, Jr., 10 Marlboro St., Exeter, N. H.

TRADE—Have 40 magazines: Radio Craft, Radio News, Radio-TV Magazine, all with covers, from years 1940-1947. What have you? Paul Blum, 366 Hunterdon St., Newark, N. J.

FOR SALE—Hallicrafter S-47 like new; will demonstrate. Make offer. Marvin Kaplan, 2715 Broad St., Easton, Pa.

FOR SALE—Hallicrafter SX-42, little used, newly aligned, $175 prepaid. F. W. Preeshl, 635 Lincoln Ave., St. Paul 5, Minn.

FOR SALE—Army BC-375 trans. comp. with tubes and 1 tuning unit and conv. man. $25; Air King mod. A725 wire rec. with mike and 3 spools wire $45. Bert Chahye, 5115 Elyria Ave., Lorain, Ohio.

FOR SALE—Philco 10" TV, needs repair $25; Riders 1-8 and 13 $50; spkrs. 75c to $2.50; pwr. transf.'s 50c to $1.75; table radios $2 to $8 as is. Local deal pref., no COD. Len Sporn, 74 Belmont Ave and N. 6th St., Paterson 2, N. J.

SALE OR TRADE—BC-603 FM rec., 10-11 meters, 12 v., push buttons; BC-604, 10 channel, 12 v. mobile trans.; BC348 rec. conv. to AC; Collins 32B trans. Make offer. K. H. Stello, c-o M. Hill, 4522 Sargent Rd. NE, Washington 17, D. C.

TRADE—16 mm sound head with photo cell, exciter lamp, like new; Heath sweep gen. TV; Shallcross 1% precision wire resistors. Want barometer and binoculars. S. Wellenc, 256 12th, No. Tonawanda, N. Y.

FOR SALE—Coaxial cable, RG8U, 25 foot lengths with connectors, $2 per length. I. Horowitz, 1775 E. 17 St., Bklyn. 29, N. Y.

WANTED—Custom used auto radio for '49 Dodge, incl. Bezel; .22 target pistol. Have radio parts and eqpt. C. B. Kelley, 7204 Clovernook Ave., Cincinnati 31, Ohio.

FOR SALE—Admiral 30-A-1 10" duo TV chassis equipped with new Dumont Inputuner and extra new picture tube $40.

FOR SALE—913 Cr. tube, six 9003's, 330 kc crystal, other tubes, parts. Will sell or trade for National FB-7 coils or what have you? Jim Chatham, 539 Westview G. Stevenson, 28521 Euclid Ave., Wickliffe, Ohio.

FOR SALE—Heathkits, assem. and wired, exc. cond.; 0-7 scope; T-2 sig. tracer; TC-1 tube checker and C.R.T. adapter; TS-2 TV align. gen.; $100 for all. Philadelphia and vic. only. J. Edward Wiley, RFD 3, Langhorne, Pa.

SWAP OR SELL—Comp., recent NRI Radio and TV course; no kits. Want scope or make offer. C. Gabler, 1307 Merriam Ave., Bronx 52, N. Y.
Dr., Winston-Salem, N. C.

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